



Atty. Dkt. No. 038602/126

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Axel ULLRICH *et al.*
Title: TREATMENT OF DIABETES MELLITUS AND
INSULIN RECEPTOR SIGNAL TRANSDUCTION
Appl. No.: 09/810,580
Filing Date: March 19, 2001
Examiner: Unassigned
Art Unit: Unassigned

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56

Commissioner for Patents
Washington, D.C. 20231

Sir:

Applicant submits herewith on Form PTO-1449 a listing of the documents cited by or submitted to the U.S. PTO in parent application Serial No. 09/232,073, filed January 15, 1999 and 08/203,189, filed February 28, 1994 (now U.S. Patent No. 5,861,266). As provided in 37 CFR §1.98(d), copies of the documents are not being provided since they were previously submitted to the United States Patent & Trademark Office in the above-identified parent application.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The instant Information Disclosure Statement is being filed before the mailing date of the First Office Action based on the CPA filed on August 10, 2001.

RELEVANCE OF EACH DOCUMENT

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Date: 10/9/01

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Respectfully submitted,

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Form PTO-1449 (MODIFIED)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 038602/1126	SERIAL NO. 09/810,580
INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)		APPLICANT Axel ULLRICH et al.	
		FILING DATE March 19, 2001	GROUP ART UNIT Unassigned

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	1.	5,155,031	10/13/92	Posner et al.			

FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO
9/13	2.	WO 94/01119	01/20/94	PCT				
	3.	WO 94/08600	04/28/94	PCT				
	4.	WO 92/13083	08/06/92	PCT				
	6.	WO 92/01050	01/23/92	PCT				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

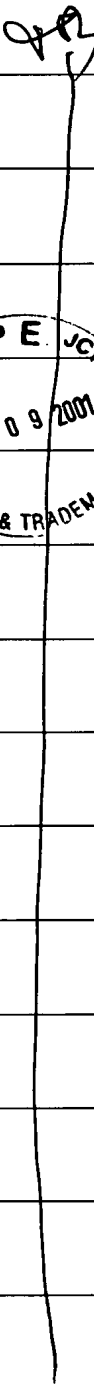
	7.	Meyerovitch et al., 1989, "Hepatic Phosphotyrosine Phosphatase Activity and Its Alterations in Diabetic Rats," <u>J. Clin. Invest.</u> 84: 976-983.
	8.	Fantus et al., 1990, "Vanadate Augments Insulin Binding and Prolongs Insulin Action in Rat Adipocytes," <u>Endocrinol.</u> 127: 2716-2725.
	9.	Shecter, Y., 1990, "Insulin-Mimetic Effects of Vanadate," <u>Diabetes</u> 39: 1-5.
	10.	Goldstein et al., 1993, "Regulation of Insulin Receptor Signaling by Protein-Tyrosine Dephosphorylation," <u>Receptor</u> 3: (1) 1-15.
	11.	Mcguire et al., 1991, "Abnormal Regulation of Protein Tyrosine Phosphatase Activities in Skeletal Muscle of Insulin-Resistant Humans," <u>Diabetes</u> 40: 938-942.
	12.	Matthews et al., 1992, Characterization of hematopoietic intracellular protein tyrosine phosphatases: Description of a phosphatase containing an SH2 domain and another enriched in proline-, glutamic acid-, serine-, and threonine-rich sequences, <u>Mol. Cell. Biol.</u> 12:2396-2405.
	13.	Gu et al., 1991, Identification, cloning, and expression of a cytosolic megakaryocyte protein-tyrosine-phosphatase with sequence homology to cytoskeletal protein 4.1, <u>Proc. Natl. Acad. Sci. USA</u> 88:5867-5871.
	14.	Tsai et al., 1991, Isolation and characterization of temperature-sensitive and thermostable mutants of the human receptor-like protein tyrosine phosphatase LAR, <u>J. Biol. Chem.</u> 266(16):10534-10543.

913	15.	Krueger <i>et al.</i> , 1990, Structural diversity and evolution of human receptor-like protein tyrosine phosphatases, EMBO J. <u>9</u> :3241-3252.
	16.	Sap <i>et al.</i> , 1990, Cloning and expression of a widely expressed receptor tyrosine phosphatase, Proc. Nat. Acad. Sci. USA <u>87</u> :6112-6116.
	17.	Streuli <i>et al.</i> , 1990, Distinct functional roles of the two intracellular phosphatase like domains of the receptor-linked protein tyrosine phosphatases LCA and LAR, EMBO Journal <u>9</u> :2399-2407.
	18.	Tonks <i>et al.</i> , 1990, CD45, an integral membrane protein tyrosine phosphatase, J. Biol. Chem. <u>265</u> :10674-10680.
	19.	Cool <i>et al.</i> , 1989, cDNA isolated from a human T-cell library encodes a member of the protein-tyrosine-phosphatase family, Proc. Natl. Acad. Sci. USA <u>86</u> :5257-5261.
	20.	Pallen <i>et al.</i> , 1988, Purification of a phosphotyrosine phosphatase that dephosphorylates the epidermal growth factor receptor autophosphorylation sites, Ann N.Y. Acad. Sci. <u>51</u> :299-308.
	21.	Zhang and Roth, 1992, The insulin receptor-related receptor, J. Biol. Chem. <u>267</u> (26):18320-18328.
	22.	Nissley <i>et al.</i> , 1991, Insulin-like growth factor receptors, Growth Factors <u>5</u> :29-43.
	23.	Soos <i>et al.</i> , 1986, Monoclonal antibodies reacting with multiple epitopes on the human insulin receptor, Biochem. J. <u>235</u> :199-208.
	24.	Ullrich <i>et al.</i> , 1986, Insulin-like growth factor 1 primary structure: comparison with insulin receptor suggests structural determinants that define functional specificity, EMBO J. <u>5</u> :2503-2512.
	25.	Ullrich <i>et al.</i> , 1985, Human insulin receptor and its relationship to the tyrosine kinase family of oncogenes, Nature <u>313</u> :756-761.
	26.	den Hertog <i>et al.</i> , 1993, Receptor protein tyrosine phosphatase α activates pp60 ^{c-src} and is involved in neuronal differentiation, EMBO J. <u>12</u> (10):3789-3798.
	27.	Fantl <i>et al.</i> , 1993, Signalling by receptor tyrosine kinases, Ann. Rev. Biochem. <u>62</u> :453-481.
	28.	Lammers <i>et al.</i> , 1993, Differential activities of protein tyrosine phosphatases in intact cells, J. Biol. Chem. <u>268</u> (30):22456-22462.
	29.	Faure <i>et al.</i> , 1992, the dephosphorylation of insulin and epidermal growth factor receptors; role of endosome-associated phosphotyrosine phosphatase(s), J. Biol. Chem. <u>267</u> (16):11215-11221.
	30.	Goldstein <i>et al.</i> , 1992, Protein-tyrosine phosphatases and the regulation of insulin action, J. Cell Biol. <u>48</u> :33-42.
	31.	Zheng <i>et al.</i> , 1992 Cell transformation and activation of pp60 ^{c-src} by overexpression of a protein tyrosine phosphatase, Nature <u>359</u> :336-339.
	32.	Sun <i>et al.</i> , 1991, Structure of the insulin receptor substrate IRS-1 defines a unique signal transduction, protein, Nature <u>352</u> :73-77.
	33.	Lammers <i>et al.</i> , 1990, Transphosphorylation as a possible mechanism for insulin and epidermal growth factor receptor activation, J. Biol. Chem. <u>265</u> (28):16886-16890.
	34.	Ostergaard <i>et al.</i> , 1989, Expression of CD45 alters phosphorylation of the lck-encoded tyrosine protein kinase in murine lymphoma T-cell lines, Proc. Natl. Acad. Sci. USA <u>86</u> :8959-8963.

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	35.	Mustelin <i>et al.</i> , 1989, Rapid activation of the T-cell tyrosine protein kinase pp56lck by the CD45 phosphotyrosine phosphatase, Proc. Natl. Acad. Sci. USA <u>86</u> :6302-6306.
	36.	Schlessinger <i>et al.</i> , 1988 Signal Transduction by allosteric receptor oligomerization, Trends in Biochemical Science <u>13</u> :443-447.
	37.	Machicao <i>et al.</i> , 1982, Phosphorylation-dephosphorylation of purified insulin receptor from human placenta; effect of insulin, FEBS Letters <u>149</u> (1):96-100.
	38.	Fantus, <i>et al.</i> , 1989, Pervanadate [Peroxide(s) of vanadate] mimics insulin action in rat adipocytes via activation of the insulin receptor tyrosine kinase, Biochem. <u>28</u> :8864-8871.
	39.	Kadota <i>et al.</i> , 1987, Stimulation of Insulin-like growth factor II receptor binding and insulin receptor kinase activity in rat adipocytes, J. Biol. Chem. <u>262</u> (17):8252-8256.
	40.	Meyerovitch <i>et al.</i> , 1987, Oral administration of vanadate normalizes blood glucose levels in streptozotocin-treated rats, J. Biol. Chem. <u>262</u> (14):6658-6662.
	41.	Swarup <i>et al.</i> , 1982, Inhibition of membrane phosphotyrosyl-protein phosphatase activity by vanadate Biochem. Biophys. Res. Comm. <u>107</u> (3):1104-1109.
	42.	Tamura <i>et al.</i> , 1984, A novel mechanism for the insulin-like effect of vanadate on glycogen synthase in rat adipocytes, J. Biol. Chem. <u>259</u> (10):6650-6658.
	43.	Walton and Dixon, 1993, Protein tyrosine phosphatases, Ann. Rev. Biochem. <u>62</u> :101-120.
	44.	Pot and Dixon, 1992, A thousand and two protein tyrosine phosphatases, Biochem. Biophys. Acta. <u>1136</u> :35-43.
	45.	Taylor <i>et al.</i> , 1992, Structural framework for the protein kinase family, Ann. Rev. Cell Biol. <u>8</u> :429-462.
	46.	Ullrich and Schlessinger, 1990, Signal transduction by receptors with tyrosine kinase activity, Cell <u>61</u> :203-212.
	47.	Hunter, 1989, Protein-tyrosine phosphatases: The other side of the coin, Cell <u>58</u> :1013-1016.
	48.	Schlessinger and Ullrich, 1992, Growth factor signaling by receptor tyrosine kinases, Neuron <u>9</u> :383-391.
	49.	Yarden and Ullrich, 1988, Growth factor receptor tyrosine kinases, Ann. Rev. Biochem. <u>57</u> :443-478.
EXAMINER		DATE CONSIDERED
<p>* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.</p>		

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